

Work Order ID 102929***102929***

Page 1

June-12-13 9:16:55 AM

Item ID: D3027-7

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Clip

Stop

NS2

Start Date: 6/11/13 Start Qty: 10.00

10

Cust Item ID:

Required Date: 6/11/13 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan: MCL

Date: 13-06-13

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
100		0.00							
100 Waterjet	FLOW WATER JET								
FLOW CNC Waterjet <i>2024 .050</i>	Memo	0.00							
	1-Cut as per Dwg D3027 ***NOTE GRAIN DIRECTION***** Dwg Rev: <u>B</u> Prog Rev: <u>B</u>								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110 QC	Memo	0.00							
Quality Control									

13 0 JM13-0725

13 0 JM13-0725

DQA: _____ Date: _____

Date:



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only

Work Order: _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS							
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					

FAULT CATEGORY

Landing Gear	General			
Bending	Bend	Folio/Program	Outside Dimensions	Pressure/Forced
Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance	Set-up
Cracks	Broken/Damage/Defect	Hardware	Part Incorrect	Temperature/Cure
Crimp/Kink/Ripple/Wave	Burrs	Inspection Incomplete/Unqualified	Part Lost/Missing	Weld
Cuffs	Contamination	Instructions Incomplete/Unclear	Part Moved	Wrong Stock Pulled
Crushing	Countersink	Misaligned/off center	Positioned Wrong	
Heat Treat	Cut Too Short	Mislabeled	Power Loss/Surge	Other
Inspection Strip in Tube	Drawing	Misread		
Marks/Chatter	Drill Holes	Off-set		
Turning Sequence	Finish	Out of Calibration		
Wave/Twist in Tube	Fit/Function	Out of Sequence		

Work Order ID 102929***102929***

Page 2

June-12-13 9:16:55 AM

Item ID: D3027-7

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Clip

Stop

NS2

Start Date: 6/11/13 Start Qty: 10.00

10

Cust Item ID:

Required Date: 6/11/13 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC8- Inspect parts - second check.	0.00	<i>S67</i>			<i>13</i>			
	Memo	0.00	<i>B7.26</i>						
130 *130* Brake NC Brake NC	NC BRAKE	0.00							<i>S6 13-07-29</i>
	Memo	0.00							
	Deburr if necessary								
	Form as per Dwg D3027								
140 *140* QC Quality Control	QCS- Inspect part completeness to step on W/O	0.00							<i>DAS 13-07-29 09 8-89</i>
	Memo	0.00							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS				
			Rework Scrap Use-as-is Suspected Unapproved	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other		
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									
FAULT CATEGORY									
Landing Gear			General						
Bending	Bend	Folio/Program	Outside Dimensions	Pressure/Forced					
Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance	Set-up					
Cracks	Broken/Damage/Defect	Hardware	Part Incorrect	Temperature/Cure					
Crimp/Kink/Ripple/Wave	Burrs	Inspection Incomplete/Unqualified	Part Lost/Missing	Weld					
Cuffs	Contamination	Instructions Incomplete/Unclear	Part Moved	Wrong Stock Pulled					
Crushing	Countersink	Misaligned/off center	Positioned Wrong						
Heat Treat	Cut Too Short	Mislabeled	Power Loss/Surge						
Inspection Strip in Tube	Drawing	Misread	Other						
Marks/Chatter	Drill Holes	Off-set							
Turning Sequence	Finish	Out of Calibration							
Wave/Twist in Tube	Fit/Function	Out of Sequence							

Work Order ID 102929

102929

Page 3

June-12-13 9:16:55 AM

Item ID: D3027-7

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Clip

Start Date: 6/11/13 Start Qty: 10.00

10

Cust Item ID:

Required Date: 6/11/13 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

Chemical Conversion Coat per QSI005 4.1

0.00

150

HandFinish

Hand Finishing

13 7/6 13-730

160

QC3- Inspect Part Finish

0.00

160

QC

Quality Control

170

Identify as per dwg & Stock Location: ST034

0.00

170

Packaging

Packaging

Memo

0.00

13 7/6 13-07-3180

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only

Work Order: _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	CrossTube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>		
NCR No. _____							

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Outside Dimensions	Pressure/Forced
Bending	Bend <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Set-up <input type="checkbox"/>
Centre Not Concentric	BOM/Route <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>
Cracks	Broken/Damage/Defect <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Weld <input type="checkbox"/>
Crimp/Kink/Ripple/Wave	Burrs <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>
Cuffs	Contamination <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>	
Crushing	Countersink <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	
Heat Treat	Cut Too Short <input type="checkbox"/>	Other <input type="checkbox"/>	
Inspection Strip in Tube	Drawing <input type="checkbox"/>		
Marks/Chatter	Drill Holes <input type="checkbox"/>		
Turning Sequence	Finish <input type="checkbox"/>		
Wave/Twist in Tube	Fit/Function <input type="checkbox"/>		

Work Order ID 102929

102929

Page 4

June-12-13 9:16:55 AM

Item ID: D3027-7

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Clip

Start Date: 6/11/13 Start Qty: 10.00

10

Cust Item ID:

Required Date: 6/11/13 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Quality Control

Memo

0.00

MLJ 13-07-31

MLJ 13-07-31

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

Date: _____

Work Order update only

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General									
Bending	<input type="checkbox"/>	Bend	<input type="checkbox"/>	Folio/Program	<input type="checkbox"/>	Outside Dimensions	<input type="checkbox"/>	Pressure/Forced		
Centre Not Concentric	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>	Set-up		
Cracks	<input type="checkbox"/>	Broken/Damage/Defect	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>	Temperature/Cure		
Crimp/Kink/Ripple/Wave	<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Inspection Incomplete/Unqualified	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>	Weld		
Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Moved	<input type="checkbox"/>	Wrong Stock Pulled		
Crushing	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Misaligned/off center	<input type="checkbox"/>	Positioned Wrong	<input type="checkbox"/>			
Heat Treat	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>	Other		
Inspection Strip in Tube	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Misread	<input type="checkbox"/>		<input type="checkbox"/>			
Marks/Chatter	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Off-set	<input type="checkbox"/>		<input type="checkbox"/>			
Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Calibration	<input type="checkbox"/>		<input type="checkbox"/>			
Wave/Twist in Tube	<input type="checkbox"/>	Fit/Function	<input type="checkbox"/>	Out of Sequence	<input type="checkbox"/>		<input type="checkbox"/>			

Picklist Print

June-12-13 9:16:55 AM

Page 1

Work Order ID: 102929

Parent Item: D3027-7

Parent Item Name: Clip

Start Date: 6/11/13

Required Date: 6/11/13

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP C05.10.07 Added forming step and Issue P/OKJ/JLM
 IPP Rev:B Now on WaterJet 08-12-08 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.050 2024-T3 .050 sheet		Purchased	No			100	sf	179.1920	0.024	0.252632 0.5		Jm 13-02-25	

Location	Loc Qty	Loc Code
MAT022	179.192	
124643	179.192	124643

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

Date: _____

Work Order update only

<p>Work Order: _____</p> <p>Part No. _____</p> <p>NCR No. _____</p>	DISPOSITION <input type="checkbox"/> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved	<input type="checkbox"/> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab	<input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite	<input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier	<input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other
---	--	--	--	--	--

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General		
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Dimensions
<input type="checkbox"/> Centre Not Concentric	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain	<input type="checkbox"/> Over/Under tolerance
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Hardware	<input type="checkbox"/> Part Incorrect
<input type="checkbox"/> Crimp/Kink/Ripple/Wave	<input type="checkbox"/> Burrs	<input type="checkbox"/> Inspection Incomplete/Unqualified	<input type="checkbox"/> Part Lost/Missing
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Moved
<input type="checkbox"/> Crushing	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Positioned Wrong
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Power Loss/Surge
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Drawing	<input type="checkbox"/> Misread	<input type="checkbox"/> Other
<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Off-set	
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration	
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Out of Sequence	

DART AEROSPACE LTD	Work Order:	102929
Description: Clip	Part Number:	D3027-7
Inspection Dwg: D3027	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Measured by:	Jm	Audited by:	ShD	Prototype Approval:	N/A
Date:	13-07-25	Date:	B726	Date:	N/A

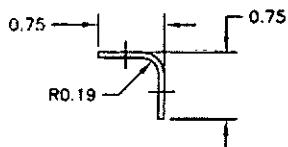
Rev	Date	Change	Revised by	Approved
A	05.04.26	New Issue P/O D350-689-013	KJ/JLM	
B	06.03.09	Dwg Rev updated; Dimensions revised	KJ/JLM	SJF



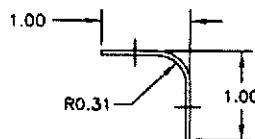
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CHECKED <i>[initials]</i>	APPROVED <i>[initials]</i>	DRAWING NO. D3027
		REV. B SHEET 1 OF 2
DATE 05.09.20		TITLE CLIP
		SCALE 1:2
A	01.05.18	NEW ISSUE
B	05.09.20	REMOVE HOLES FROM -7

RELEASED

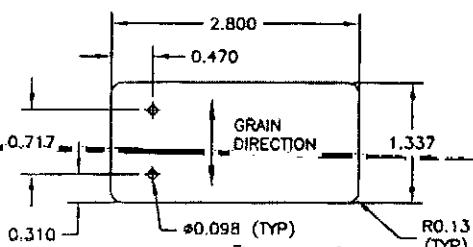
2020-05-10 03:26



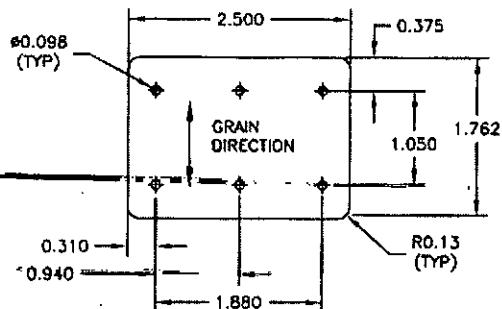
D3027-1 BEND DETAIL



D3027-3 BEND DETAIL



D3027-1 FLAT PATTERN
(0.063" SHEET)



D3027-3 FLAT PATTERN
(0.050" SHEET)

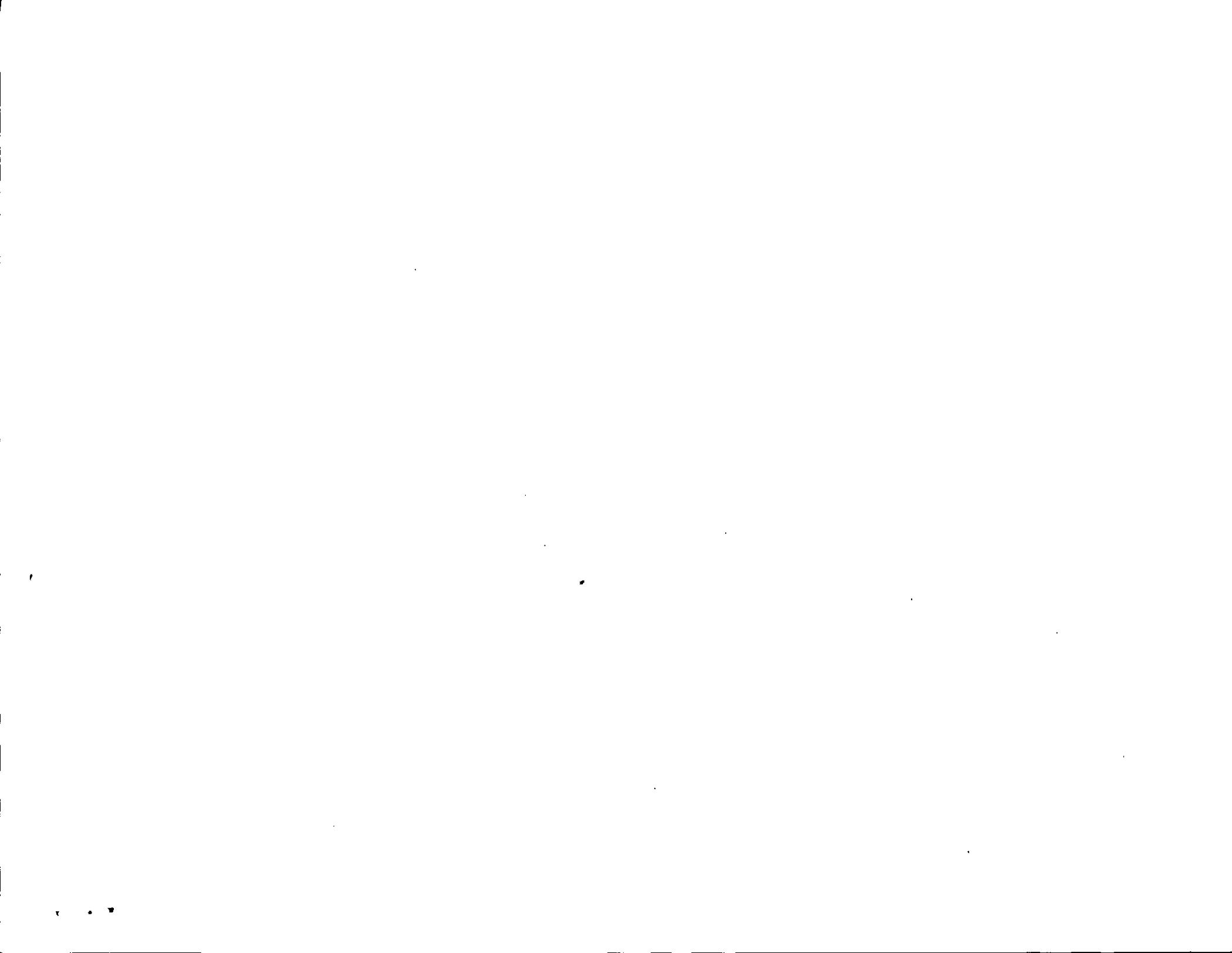
NOTES:

- 1) BREAK ALL UNMARKED SHARP CORNER 0.010 TO 0.020
- 2) MATERIAL: 2024-T3 (QQ-A-250/4)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

3/14/2020
L-9021
14/526201
Aerojet
J.A.

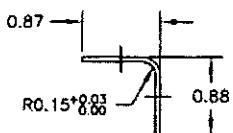
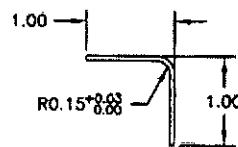
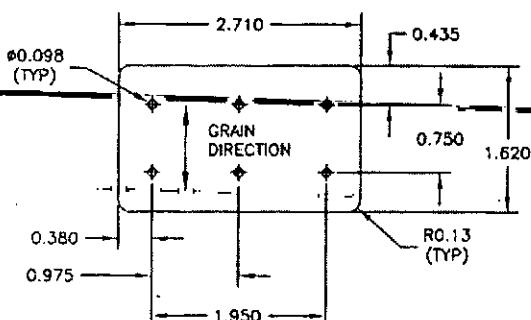
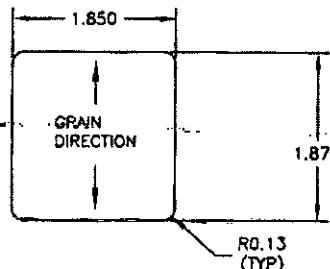
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DART

DESIGN RF	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[initials]</i>	APPROVED <i>[initials]</i>	DRAWING NO. D3027	REV. B SHEET 2 OF 2
DATE 05.09.20		TITLE CLIP	SCALE 1:2

RELEASED05.10.03 *[initials]*D3027-5 BEND DETAILD3027-7 BEND DETAILD3027-5 FLAT PATTERN
(0.050" SHEET)D3027-7 FLAT PATTERN
(0.050" SHEET)**NOTES:**

- 1) BREAK ALL UNMARKED SHARP CORNER 0.010 TO 0.020
- 2) MATERIAL: 2024-T3 (QQ-A-250/4)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

626201

